



Confusion

by Arya Akhavan (August 2013)

Angles for R.I. = 1.830

101 + 24 girdles = 125 facets

2-fold, mirror-image symmetry

96 index

L/W = 1.000 T/W = 0.406 U/W = 0.406

P/W = 0.465 C/W = 0.198

Vol./W³ = 0.284

PAVILION

P1	43.00°	01-47-49-95	Cut to centerpoint.
P2	42.60°	02-46-50-94	Meet at culet.
G1	90.00°	01-47-49-95	Set stone size.
G2	90.00°	03-45-51-93	Meet P1, P2, G1
P3	42.91°	03-45-51-93	Level girdle.
P4	42.79°	04-44-52-92	Meet P2, P4
P5	43.36°	05-43-53-91	Meet G2, P3, P4
P6	58.54°	19-29-67-77	Meet P4, P5
P7	61.85°	21-27-69-75	Meet P4, P5, P6
P8	63.71°	23-25-71-73	Meet P4, P5, P6, P7
G3	90.00°	05-19-29-43-53-67-77-91	Level girdle.
G5	90.00°	21-27-69-75	Level girdle.
G6	90.00°	23-25-71-73	Level girdle.

CROWN

C1	40.00°	01-23-25-47-49-71-73-95	Set girdle width.
C2	40.00°	03-21-27-45-51-69-75-93	Level girdle.
C3	40.00°	05-19-29-43-53-67-77-91	Level girdle.
C4	37.00°	96-24-48-72	Meet {G1 OR G6}, C1
C5	37.29°	04-20-28-44-52-68-76-92	Meet {G2, G3 OR G4, G5}, C2, C3
C6	34.00°	01-23-25-47-49-71-73-95	Meet C1, C2, C4, C5
C7	34.00°	03-21-27-45-51-69-75-93	Meet C1, C2, C4, C5, C6
C8	23.86°	05-19-29-43-53-67-77-91	Meet C5, C7
C9	21.90°	03-21-27-45-51-69-75-93	Meet C6, C7, C8
T	0.00°	Table	Meet C8, C9

I was writing a design for a piece of Nd:YAG I have, shaped in a quarter-cylinder. The best shape for surface area would be a square, and for yield would be a rectangle with a keel, so I combined the two. It looks confused. Works in materials from quartz to rutile (RI = 1.54 - 2.62) with no changes, but I prefer it in YAG.

Suggested size = 12-25 mm

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